ENVIORNMENTAL SAMPLING, ANALYSIS AND RESULTS: MONITORING LOCATION DATA STANDARD

Standard No.: EX000003.1

January 6, 2006

This standard has been produced through the Environmental Data Standards Council (EDSC).

Foreword

The Environmental Data Standards Council identifies, prioritizes and pursues the creation of data standards for those areas where information exchange standards will provide the most value in achieving environmental results. The Council involves Tribes and Tribal Nations, state and federal agencies in the development of the standards and then provides the draft materials for general review. Business groups, non-governmental organizations, and other interested parties may then provide input and comment for Council consideration and standard finalization. Draft and final standards are available at http://www.envdatastandards.net.

1.0   INTRODUCTION

This Environmental Sampling, Analysis, and Results (ESAR): Monitoring Location Data Standard identifies and describes the elements required for describing Monitoring Location information. It provides information about the identification, contacts, location, and attachments of monitoring location data.

It should be noted that there may be many monitoring locations that are utilized by a project and that a monitoring location might not be associated with any project. Several field activities may be conducted at one monitoring location over time.

1.1   Scope

This standard provides and describes data groupings and data elements that are used to define and exchange data and information about Environmental Sampling, Analysis, and Results: Monitoring Location.

1.2   Revision History

Date	Version	Description
January 6, 2006	EX000003.1	Initial Environmental Data Standards Council Adoption

1.3   References to Other Data Standards

This standard relies on other standards to make it complete and provide the necessary support. As such users should consider the references to other data standards noted below as integral to the Monitoring Location Data Standard. These include:

- Contact Information [EX000019.2] Data Standard
- Latitude/Longitude [EX000017.2] Data Standard
- Attached Binary [EX000006.1] Object Data Standard
- Bibliographic Reference [EX000007.1] Data Standard
- Measure [EX000010.1] Data Standard
- Representation of Date and Time [EX000013.1] Data Standard
- Well Information [Draft Version 1.0] Data Standard

1.4   Terms and Definitions

For the purposes of this document, the following terms and definitions apply.

Term	Definition
Monitoring Location	An identifiable location where an environmental sample, onsite measurement, and/or observation is determined.
Probe	A specialized inlet used where a sample is collected from an environmental matrix for delivery to a sampler or point analyzer for pollutant analysis.

1.5   Implementation

Users are encouraged to use the XML registry housed on the Exchange Network Web site to download schema components for the construction of XML schema flows (http://www.exchangenetwork.net).

1.6   Document Structure

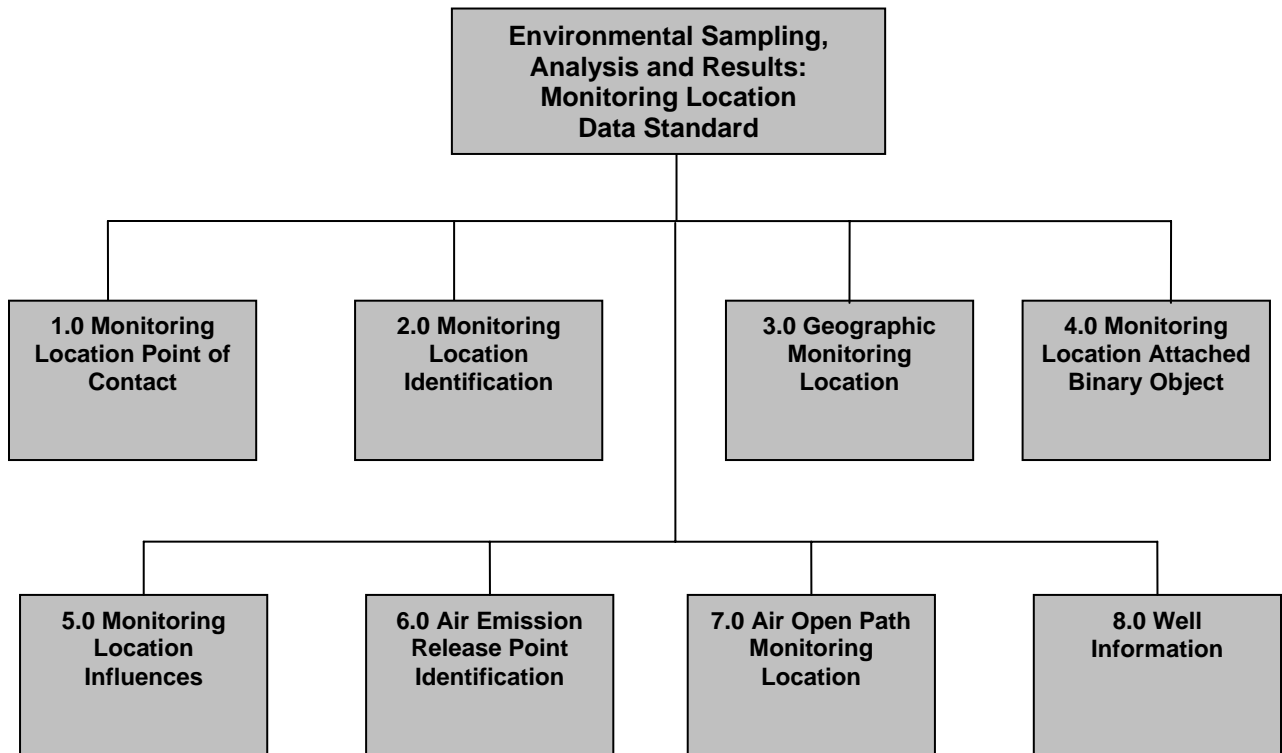The structure of this document is briefly described below:

a. Section 2.0 ESAR: Monitoring Location Diagram illustrates the principal data groupings contained within this standard.

b. Section 3.0 ESAR: Monitoring Location Data Standard Table provides information on the high level, intermediate and elemental ESAR: Monitoring Location data groupings. Where applicable, for each level of this data standard, a definition, XML tag, note(s), example list of values and format are provided. The format column may include the number of characters for the associated data element, where "A" specifies alphanumeric, "N" designates numeric, "G" and "D" are used for grouping and date/time.

c. Data Element Numbering. For purposes of clarity and to enhance understanding of data standard hierarchy and relationships, each data group is numerically classified from the primary to the elemental level.

d. Code and Identifier Metadata: Metadata, defined here as data about data or data elements, includes their descriptions and/or any needed context setting information required to identify the origin, conditions of use, interpretation, or understanding the information being exchanged or transferred. (Adapted from ISO/IEC 2382-17:1999 Information Technology Vocabulary—Part 17: Databases 17.06.05 metadata). Based on the business need, additional metadata may be required to sufficiently describe an identifier or a code. A note regarding this additional metadata is included in the notes column for identifier and code elements. Additional metadata for identifiers may include:

   * Code List Identifier, which is a standardized reference to the context or source of the set of codes

   Additional metadata for codes may include:

   * Code List Identifier, which is a standardized reference to the context or source of the set of codes

   * Code List Version Identifier, which identifies the particular version of the set of codes

   * Code List Version Agency Identifier, which identifies the agency responsible for maintaining the set of codes

   * Code List Name, which describes the corresponding name for which the code represents

e. Appendix A, ESAR: Monitoring Location Data Structure Diagram illustrates the hierarchical classification of the data standard. This diagram enables business and technical users of this standard to quickly understand its general content and complexity. Appendix B, lists the references for the ESAR Monitoring Location Document..

f.

2.0   ENVIRONMENTAL SAMPLING, ANALYSIS, AND RESULTS: MONITORING LOCATION DIAGRAM

This diagram specifies the major data groups that may be used to identify the characteristics and/or to catalog a monitoring location or locations.

```
                    ┌─────────────────────────┐
                    │ Environmental Sampling,  │
                    │  Analysis and Results:   │
                    │   Monitoring Location    │
                    │      Data Standard       │
                    └─────────────────────────┘

┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│ 1.0 Monitoring│  │ 2.0 Monitoring│  │ 3.0 Geographic│  │ 4.0 Monitoring│
│ Location Point│  │   Location    │  │  Monitoring   │  │Location Attached│
│  of Contact   │  │ Identification│  │   Location    │  │ Binary Object │
└──────────────┘  └──────────────┘  └──────────────┘  └──────────────┘

┌──────────────┐  ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
│ 5.0 Monitoring│  │6.0 Air Emission│ │7.0 Air Open Path│ │ 8.0 Well     │
│   Location    │  │ Release Point │  │  Monitoring   │  │ Information  │
│  Influences   │  │ Identification│  │   Location    │  │              │
└──────────────┘  └──────────────┘  └──────────────┘  └──────────────┘
```

3.0   ENVIRONMENTAL SAMPLING, ANALYSIS, AND RESULTS: MONITORING LOCATION DATA TABLE

1.0   Monitoring Location Point of Contact

Definition: Identifies the organization or person where questions about the Monitoring Location may be directed.

Relationships: None.

Notes: Refer to the **Contact Information [EX000019.2] Data Standard.**

The following items may be needed:

Individual
Organization
Affiliation
Mailing Address
Location Address
Telephonic
Electronic Address

XML Tag: MonitoringLocationPointContact

2.0   Monitoring Location Identification

Definition: The text or code sets and numbers that uniquely identify a Monitoring Location.

Relationships: None.

Notes: None.

XML Tag: MonitoringLocationIdentification

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
2.1 Monitoring Location Identifier	A designator used to uniquely identify the Monitoring Location.	Example List of Values: • 32WAL-34.0 • HAV-OU3-CW16D-0904 • WGMW-9G_060804 • 04S10595 • 2420-10/MW/RW #10 • CF-SD047 • AQS#: 180030002 • STORET#: 133318 *Note:* Based on the business need, additional metadata may be required to sufficiently describe an identifier. This additional metadata is described in the Introduction section 1.6.d.	A	MonitoringLocationIdentifier
2.2 Monitoring Location Name	The designator specified by the sampling organization for the site at which sampling or other activities are conducted.	Example List of Values: • Walla Walla River at Swegle Road • 1018 E LARCH Ave. OSBURN, ID PR07GF01/2420 • Tillamook Bay at Station 14 • Springfield Mobile Estates • Freshwater System • Potato Creek State Park • Douglas County Landfill	A	MonitoringLocationName

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
2.3 Monitoring Location Type Name	The descriptive name for a type of monitoring location.	*Note:* Multiples of Monitoring Location Type Name may be allowed. Example List of Values: • NAMS National Air Monitoring Station • SLAMS State/Local Air Monitoring Station • Index • PSD • Industrial • Tribal • Superfund Site • Shellfish Monitoring Station	A	MonitoringLocationTypeName
2.4 Monitoring Location Description Text	Text description of the location of the monitoring location.	Example List of Values: • Sample reach extends 100 meters downstream of station latitude/longitude • Walla Walla River at Swegle Road, river mile 34.0, sampled from right bank • On top of Smalley school in Timberville, Oregon	A	MonitoringLocationDescriptionText

3.0   Geographic Monitoring Location

Definition: Provides location information about a monitoring location.

Relationships: None.

Notes: None.

XML Tag: GeographicMonitoringLocation

3.1   Monitoring Location Latitude and Longitude Measure

Definition: The point on the earth of the monitoring location.

Relationships: None.

Notes: Refer to **Latitude/Longitude [EX000017.2] Data Standard**.

The following items may be needed

Latitude Measure
Longitude Measure
Horizontal Accuracy Measure
Source Map Scale Number
Coordinate Data Source Name or Code
Horizontal Collection Method Name or Code
Horizontal Reference Datum Name or Code, and
Reference Point Text or Code
Vertical Measure
Vertical Accuracy Measure
Vertical Collection Method Text or Code
Vertical Reference Datum Name or Code

XML Tag: MonitoringLocation

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
3.2 Vertical Reference Point Text	The point or range at which the vertical measurement was established.	*Note:* This element may also be used in special circumstances to describe for example, the tidal conditions at the time of measurement, such as mean low tide, or the point on a physical structure, such as the top of the well casing. Example List of Values: • Mean low tide, • Top of well casing, • Probe location on stack	A	VerticalReferencePointText
3.3 Horizontal Reference Point Offset Measure	The measure of the distance (i.e. offset) from the Monitoring Location to the horizontal reference point.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	HorizontalReferencePointOffsetMeasure
3.4 Vertical Reference Point Offset Measure	The measure of the distance (i.e. offset) from the Monitoring Location to the vertical reference point.	*Note:* When the point of sample collection (i.e. Monitoring Location) is above the Vertical Reference Point, this will have positive value. Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	VerticalReferencePointOffsetMeasure

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
3.5 Probe Height Measure	Distance of the probe from local ground level or vertical reference point.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	ProbeHeight Measure
3.6 Probe Vertical Distance Measure	The vertical distance of the probe from its support structure.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	ProbeVertical DistanceMea sure
3.7 Probe Horizontal Distance Measure	The horizontal distance of the probe from its support structure.	Reference the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	ProbeHorizon talDistanceM easure

4.0   Monitoring Location Attached Binary Object

Definition: References documents, images, maps, photos, laboratory materials, geospatial coverages, and other objects within the data submission that pertain to the Monitoring Location.

Relationships: None.

Notes: Refer to the **Attached Binary Object [EX000006.1] Data Standard**.

Multiple objects may be attached to data submission for each project included in the submission. Where a binary object is attached, both the type code and the title of the file must be provided. Attached Binary Object descriptors will adhere to the specified technical standards.

XML Tag: MonitoringLocationAttachedBinaryObject

Monitoring Location – Supplemental Information

Note: The following data elements are supplemental information that may be tracked for monitoring locations. In some cases, these elements are more commonly used for a particular environmental media (e.g. Water) or regulatory program.

5.0   Monitoring Location Influences

Definition:	Supplemental information whose primary purpose is to describe physical features proximate to a monitoring location that may influence monitoring data values.
Relationships:	None.
Notes:	None.
XML Tag:	MonitoringLocationInfluences

5.1   Air Monitoring Location Influences

Definition:	Supplemental information whose primary purpose is to describe physical features proximate to a monitoring location that may influence air monitoring data values.
Relationships:	None.
Notes:	None.
XML Tag:	AirMonitoringLocationInfluences

5.1.1   Road Influences

Definition:	Proximate road features that may influence monitoring data values.
Relationships:	None.
Notes:	There may be any number of Road Influences/ Local Impacts.
XML Tag:	RoadInfluences

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
5.1.1.1 Direction from Monitor to Road Code	The compass direction from the monitor to the road at its nearest point.	Example List of Values: • NNE • W • SE	A	DirectionMonitorRoadCode

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
5.1.1.2 Road Name	The designator for a road.	Example List of Values: • I95 • US1 • Kildaire Farm Rd. • Access 1	A	RoadName
5.1.1.3 Road Type Name	The type of road being described.	Example List of Values: • Highway • Secondary • Residential	A	RoadTypeName
5.1.1.4 Road Surface Type Name	The type of surface present on the road.	Example List of Values: • Paved • Unpaved	A	RoadSurfaceTypeName
5.1.1.5 Traffic Count Measure	An estimate of the traffic volume on the roadway.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	TrafficCountMeasure
5.1.1.6 Traffic Count Date	The date when the traffic count value was estimated.	Refer to the Representation of **Date and Time [EX000013.1] Data Standard.**	D	TrafficCountDate
5.1.1.7 Traffic Count Source Name	The agency providing the traffic count data.	Example List of Values: • US-DOT • VA-DOT	A	TrafficCountSourceName

10

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
5.1.1.8 Distance from Monitor to Road Measure	The distance between the sensing of air sampling equipment at a monitoring site and the nearest edge of the roadway.	Reference the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	DistanceMonitorRoadMeasure

5.1.2 Obstruction Influences

Definition: Proximate obstruction features that may influence monitoring data values.

Relationships: None.

Notes: There may be any number of Obstruction Influences/ Local Impacts.

XML Tag: ObstructionInfluences

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
5.1.2.1 Obstruction Identifier	A designator used to uniquely identify an obstruction.	*Note:* Based on the business need, additional metadata may be required to sufficiently describe an identifier. This additional metadata is described in the Introduction section 1.6.d.	A	ObstructionIdentifier
5.1.2.2 Obstruction Type Name	The type of obstruction responsible for the restricted airflow of a monitor.	Example List of Values: • Tree • Building • Outcrop	A	ObstructionTypeName
5.1.2.3 Distance from Monitor to Obstruction Measure	The distance between a probe and obstruction.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	DistanceMonitorObstructionMeasure

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
5.1.2.4 Obstruction Height Measure	The height of the top of the obstruction above a probe.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	ObstructionHeightMeasure
5.1.2.5 Obstruction Width Measure	The width of the obstruction at the height of a probe.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	ObstructionWidthMeasure
5.1.2.6 Direction from Monitor to Obstruction Code	The direction from the monitor to the obstruction.	Example List of Values: • NW • S • WSW	A	DirectionMonitorObstructionCode

5.2   Water/Waste Monitoring Location Influences

Definition: Supplemental information whose primary purpose is to describe physical features proximate to a monitoring location that may influence water or waste monitoring data values.

Relationships: None.

Notes: Example List of Values:

• Station located upgradient from Amalgamated Industries' discharge

• Station located below the spillway of Acme Dam to monitor total dissolved gas

XML Tag: WaterWasteMonitoringLocationInfluence

6.0   Air Emission Release Point Identification

Definition: Description of the characteristics of an emission release point (usually a stack) that may be used for monitoring activities at a facility.

Relationships: None.

Notes: None.

XML Tag: AirEmissionReleasePointIdentification

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
6.1 Air Emission Release Point Identifier	A designator used to uniquely identify a location where emissions are released to ambient air.	*Note:* Unique identifier – If no stack, then ID for fugitive release. *Note:* Based on the business need, additional metadata may be required to sufficiently describe an identifier. This additional metadata is described in the Introduction section 1.6.d.	A	AirEmissionReleasePointIdentifier
6.2 Air Emission Release Point Type Name	A description of the physical configuration of the release point.	Example List of Values: • Fugitive • Vertical • Horizontal • Gooseneck • Vertical with Rain Cap • Downward Facing Vent	A	AirEmissionReleasePointTypeName

6.3   Air Emission Release Point Parameters - Stack

Definition: The parameters of an emission release point if it is a stack.

Relationships: None.

Notes: These parameters may be measured, calculated, or estimated.

XML Tag: AirEmissionReleasePointParametersStack

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
6.3.1 Air Emission Release Point Stack Height Measure	The height of a stack from the ground.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	AirEmissionReleasePointStackHeightMeasure
6.3.2 Air Emission Release Point Stack Diameter Measure	The diameter of a stack at the release height.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	AirEmissionReleasePointStackDiameterMeasure
6.3.3 Air Emission Release Point Stack Fence Line Distance Measure	The measure of the horizontal distance from a stack to the nearest fence line of a property within which the stack is located.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	AirEmissionReleasePointStackFenceLineDistanceMeasure
6.3.4 Air Emission Release Point Exit Gas Temperature Measure	The temperature of an exit gas stream.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	AirEmissionReleasePointExitGasTemperatureMeasure

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
6.3.5 Air Emission Release Point Exit Gas Velocity Measure	The velocity of an exit gas stream.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	AirEmissionReleasePointExitGasVelocityMeasure
6.3.6 Air Emission Release Point Exit Gas Flow Rate Measure	The value of the stack gas flow rate.	Refer to the **Measure [Final EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	AirEmissionReleasePointExitGasFlowRateMeasure

6.4   Air Emission Release Point Parameters – Fugitive

Definition: The parameters of an emission release point if it is a fugitive release point that cannot be traced to a single source point.

Relationships: None.

Notes: These parameters may be measured, calculated, or estimated.

XML Tag: AirEmissionReleasePointParametersFugitive

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
6.4.1 Air Emission Release Point Horizontal Area Fugitive Measure	Horizontal area of the source of fugitive emissions.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	AirEmissionReleasePointHorizontalAreaFugitiveMeasure

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
6.4.2 Air Emission Release Point Height Fugitive Measure	Release height (above terrain) of fugitive emissions.	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	AirEmissionReleasePointHeightFugitiveMeasure

7.0   Air Open Path Monitoring Location

Definition: Supplemental information that more fully describes the open path monitoring configuration, in which an energy beam (laser, microwave, etc.) is sent from a transmitter to a receiver to measure compounds in the air between the two devices.

Relationships: None.
Notes: None.
XML Tag: AirOpenPathMonitoringLocation

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
7.1 Open Path Identifier	A designator used to uniquely identify each individual orientation of an open path measurement at a site.	*Note:* Based on the business need, additional metadata may be required to sufficiently describe an identifier. This additional metadata is described in the Introduction section 1.6.d.	A	OpenPathIdentifier
7.2 Open Path Transmitter Horizontal Reference Point Offset Measure	The measure of the distance (i.e. offset) from the Open Path Transmitter to the horizontal reference point.	*Note:* This offset value may also be valid to measure the offset distance for the Receiver as well, if a Reflector is used and the Transmitter and Receiver are the same. Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	OpenPathTransmitterHorizontalReferencePointOffsetMeasure

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
7.3 Open Path Receiver Horizontal Reference Point Offset Measure	The measure of the distance (i.e. offset) from the Open Path Receiver to the horizontal reference point.	*Note:* This offset value may also be valid to measure the offset distance for the Reflector, if the Transmitter and Receiver are the same, or they are at the same location. Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	OpenPathReceiverHorizontalReferencePointOffsetMeasure
7.4 Open Path Transmitter Vertical Reference Point Offset Measure	The measure of the distance (i.e. offset) from the Open Path Transmitter to the vertical reference point.	*Note:* When the point of sample collection (i.e. Monitoring Location) is above the Vertical Reference Point, this will have a positive value. This offset value may also be valid to measure the offset distance for the Receiver as well, if a Reflector is used and the Transmitter and Receiver are the same. Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	OpenPathTransmitterVerticalReferencePointOffsetMeasure

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
7.5 Open Path Receiver Vertical Reference Point Offset Measure	The measure of the distance (i.e. offset) from the Open Path Receiver to the vertical reference point.	*Note:* When the point of sample collection (i.e. Monitoring Location) is above the Vertical Reference Point, this will have a positive value. This offset value may also be valid to measure the offset distance for the Reflector, if the Transmitter and Receiver are the same, or they are at the same location. Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	OpenPathReceiverVerticalReferencePointOffsetMeasure
7.6 Open Path Beam Vertical Angle Measure	Angle measure in degrees from the horizontal at the height of the transmitter.	*Note:* Angle can be positive (i.e., upward from the horizontal) or negative (i.e., downward from the horizontal). Refer to the **Measure [EX000010.1] Data Standard**	G	OpenPathBeamVerticalAngleMeasure
7.7 Open Path Beam Azimuth Angle Measure	Horizontal orientation angle of beam measured clockwise from north in degrees.	Refer to the **Measure [EX000010.1] Data Standard** Example List of Values: • 90 degrees (for East) • 180 degrees (for South)	G	OpenPathBeamAzimuthAngleMeasure
7.8 Open Path Beam Length Measure	The measure of the length of the open path beam projected between the transmitter and the receiver or reflector (as appropriate).	Refer to the **Measure [EX000010.1] Data Standard.** The following items may be needed: Measure Value, Measure Unit Code, Measure Qualifier Code, Measure QA/QC.	G	OpenPathBeamLengthMeasure

Data Element Name	Data Element Definitions	Notes	Format	XML Tags
7.9 Open Path Location Land Use Text	Description of the land use of the monitoring location used during open path monitoring.	*Note:* This could include prevalent land use under the path of the beam projected, as well as the land use in the opposite direction of the beam transmission for a distance at least equal to beam length. Example List of Values: • One mile downwind from town landfill	A	OpenPathLocationLandUse Text

8.0   Well Information

Definition: Description of the information about a well that may be used for monitoring activities.   .
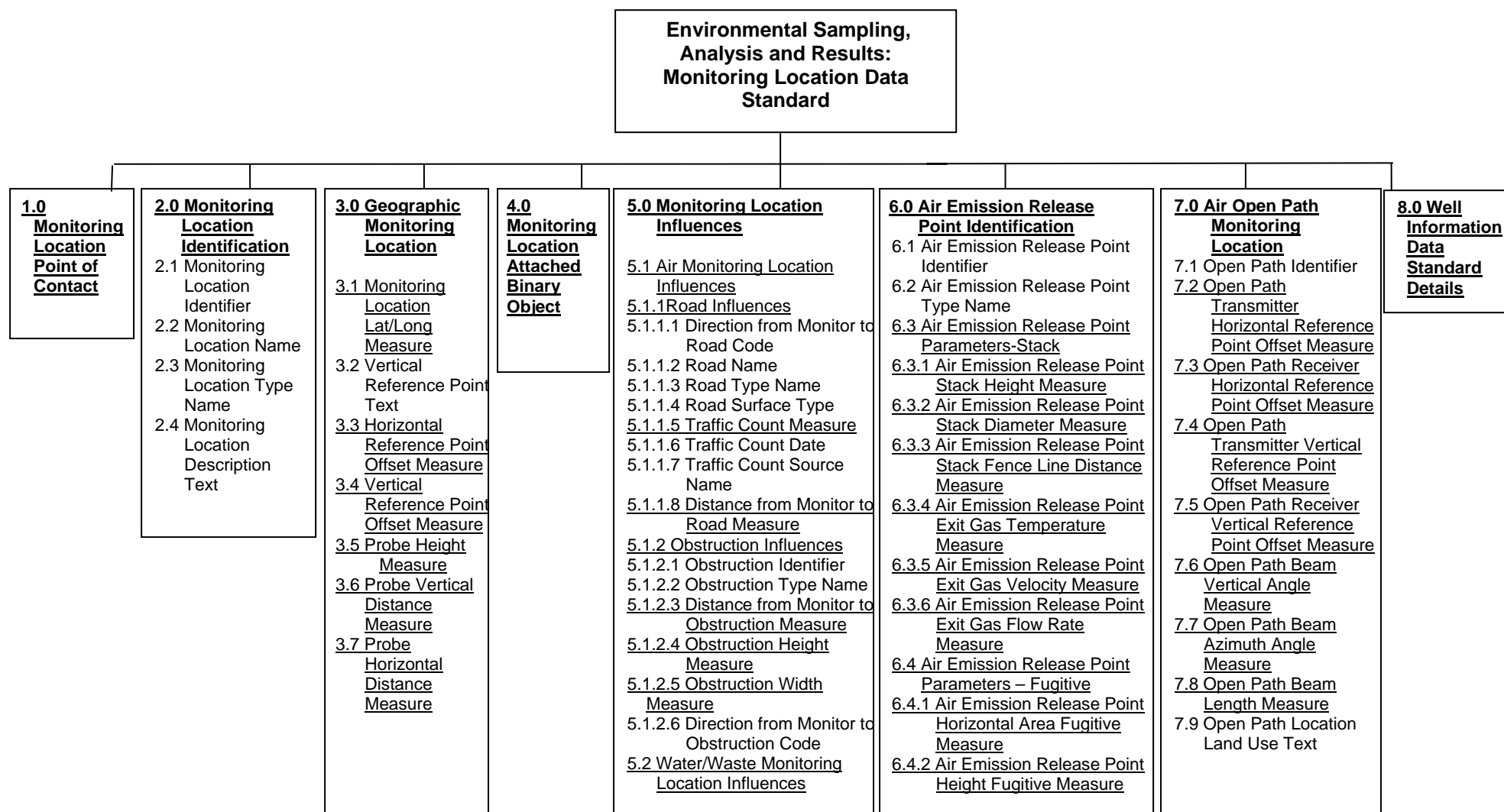
Relationships: None.
Notes: None.
XML Tag: WellInformation

Appendix A
Environmental Sampling, Analysis and Results: Monitoring Location Structure Diagram

Environmental Sampling, Analysis and Results: Monitoring Location Data Standard

1.0 Monitoring Location Point of Contact

2.0 Monitoring Location Identification
2.1 Monitoring Location Identifier
2.2 Monitoring Location Name
2.3 Monitoring Location Type Name
2.4 Monitoring Location Description Text

3.0 Geographic Monitoring Location
3.1 Monitoring Location Lat/Long Measure
3.2 Vertical Reference Point Text
3.3 Horizontal Reference Point Offset Measure
3.4 Vertical Reference Point Offset Measure
3.5 Probe Height Measure
3.6 Probe Vertical Distance Measure
3.7 Probe Horizontal Distance Measure

4.0 Monitoring Location Attached Binary Object

5.0 Monitoring Location Influences
5.1 Air Monitoring Location Influences
5.1.1 Road Influences
5.1.1.1 Direction from Monitor to Road Code
5.1.1.2 Road Name
5.1.1.3 Road Type Name
5.1.1.4 Road Surface Type
5.1.1.5 Traffic Count Measure
5.1.1.6 Traffic Count Date
5.1.1.7 Traffic Count Source Name
5.1.1.8 Distance from Monitor to Road Measure
5.1.2 Obstruction Influences
5.1.2.1 Obstruction Identifier
5.1.2.2 Obstruction Type Name
5.1.2.3 Distance from Monitor to Obstruction Measure
5.1.2.4 Obstruction Height Measure
5.1.2.5 Obstruction Width Measure
5.1.2.6 Direction from Monitor to Obstruction Code
5.2 Water/Waste Monitoring Location Influences

6.0 Air Emission Release Point Identification
6.1 Air Emission Release Point Identifier
6.2 Air Emission Release Point Type Name
6.3 Air Emission Release Point Parameters-Stack
6.3.1 Air Emission Release Point Stack Height Measure
6.3.2 Air Emission Release Point Stack Diameter Measure
6.3.3 Air Emission Release Point Stack Fence Line Distance Measure
6.3.4 Air Emission Release Point Exit Gas Temperature Measure
6.3.5 Air Emission Release Point Exit Gas Velocity Measure
6.3.6 Air Emission Release Point Exit Gas Flow Rate Measure
6.4 Air Emission Release Point Parameters – Fugitive
6.4.1 Air Emission Release Point Horizontal Area Fugitive Measure
6.4.2 Air Emission Release Point Height Fugitive Measure

7.0 Air Open Path Monitoring Location
7.1 Open Path Identifier
7.2 Open Path Transmitter Horizontal Reference Point Offset Measure
7.3 Open Path Receiver Horizontal Reference Point Offset Measure
7.4 Open Path Transmitter Vertical Reference Point Offset Measure
7.5 Open Path Receiver Vertical Reference Point Offset Measure
7.6 Open Path Beam Vertical Angle Measure
7.7 Open Path Beam Azimuth Angle Measure
7.8 Open Path Beam Length Measure
7.9 Open Path Location Land Use Text

8.0 Well Information Data Standard Details

Appendix B
References

i. *ISO/IEC 2382-17:1999 Information Technology Vocabulary—Part 17: Databases 17.06.*